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No. 05-1056

In the Supreme Court of the United States

MICROSOFT CORPORATION, PETITIONER

v.

AT&T CORP.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE SUPPORTING PETITIONER

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QUESTIONS PRESENTED

In certain circumstances, Section 271(f) of the Patent Act prohibits the "suppl[y] * * * from the United States * * * [of] all or a substantial portion of the components of a patented invention * * * in such manner as to actively induce the combination of such components outside of the United States," as well as the "suppl[y] * * * from the United States [of] any component of a patented invention that is especially made or especially adapted for use in the invention." 35 U.S.C. 271(f)(1) and (2). For purposes of that statute, the questions presented are:

1. Whether software object code can be a "component" of a patented invention; and, if so,

2. Whether copies of software object code are "supplied" from the United States when those copies are created overseas by replicating a separate master version supplied from the United States.

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INTEREST OF THE UNITED STATES

The question in this case is whether United States patent law restricts companies from sending master copies of their software overseas when those master copies are duplicated overseas and the foreign-made copies are used in foreign-made computers sold in foreign markets. The United States Patent and Trademark Office, which is responsible for granting and issuing patents and advising the President on issues of patent policy, 35 U.S.C. 2(a)(1) and (b)(8), has a substantial interest in the resolution of that question. The application of United States patent law to the participation of United States companies in foreign markets also raises issues concerning the competitiveness of American companies abroad and the respective roles of the United States' and other nations'

patent laws, issues of concern to the Department of Commerce. At the invitation of the Court, the United States filed a brief as amicus curiae at the petition stage of this case.

STATEMENT

1. "[W]hoever without authority makes * * * within the United States * * * any patented invention," is generally liable for patent infringement. 35 U.S.C. 271(a). In *Deepsouth Packing Co.* v. *Laitram Corp.*, 406 U.S. 518 (1972), this Court held that a company did not violate that provision by manufacturing the component parts of a patented shrimp deveining machine in the United States and then shipping those parts overseas for final assembly. *Id.* at 523-524, 527-529. The Court explained that "it is not an infringement to make or use a patented product outside of the United States," *id.* at 527, and the patented invention (the shrimp deveining machine) was not made until its components were finally assembled abroad, *id.* at 528-529.

Congress responded by enacting 35 U.S.C. 271(f), which provides:

> (f)(1) Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

> (2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

Patent Law Amendments Act of 1984, Pub. L. No. 98-622, § 101, 98 Stat. 3383 (35 U.S.C. 271(f)).

2. United States Reissue Patent No. 32,580 (the '580 patent) claims an apparatus for digitally encoding and compressing recorded speech. Respondent brought this action against petitioner in the United States District Court for the Southern District of New York, contending that computers loaded with copies of petitioner's Windows operating system infringe the '580 patent because Windows incorporates software code for encoding and compressing speech in the manner claimed by the '580 patent. Neither the Windows software nor a computer standing alone infringes the '580 patent; instead, the patent is infringed by a computer that has been loaded with the Windows software and is capable of performing as the patented speech processor. The parties entered into a stipulated judgment in which petitioner conceded that the '580 patent was valid, enforceable, and infringed. See Pet. App. 3a-4a.

The only issue on which the parties failed to reach agreement was petitioner's alleged liability under 35 U.S.C. 271(f) for Windows-based computers manufactured and sold overseas. The relevant facts on that point are undisputed. Petitioner conceives, writes, compiles, tests, and debugs its Windows operating system software in the United States. It then provides the operating system to foreign computer manufacturers in one of several ways. First, petitioner creates a limited number of "golden master disks" on which it stores the machine-readable binary object code for the Windows operating system.[1] In some cases, petitioner ships those golden master disks to foreign computer manufacturers, who replicate the object code on the master disks to create separate copies of the code and then install those copies on the computers they assemble. In other instances, petitioner ships golden master disks to foreign replicators, who make copies of the object code and ship those copies to foreign computer manufacturers, who install the copies on their computers. Alternatively, petitioner sometimes provides the Windows object code to foreign computer manufacturers and replicators via encrypted electronic transmission. The transmitted code is then decrypted and copied, and the copies are installed on foreign computer products. Pet. App. 45a-46a.

In each case, the computer hardware is manufactured overseas; the Windows operating system is installed overseas from copies of the object code that were created overseas; and the completed systems are sold overseas to overseas end-users. Pet. App. 45a-46a. The

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[1] Software in the form in which it is written and understood by humans is called "source code." To be functional, however, software must be converted (or "compiled") into its machine-usable version, which is called "object code." See Pet. App. 22a n.5.

golden master disk itself is "never installed on a computer that is then sold." *Id.* at 45a.

3. The district court held that petitioner is liable under Section 271(f) for all foreign sales of Windows-based computers. Pet. App. 21a-38a. After concluding that software can be a "component" for purposes of Section 271(f) because it is "well-established" in other contexts that "software can be a component of a patented invention," *id.* at 30a, the court went on to explain that "there is no limitation of the term 'components,' either in the statutory text or in the legislative history, to machines or other structural combinations," *id.* at 31a. The court also held that copies of the object code that are replicated overseas may be deemed supplied from the United States because "the object code is originally manufactured in the United States, and supplied from the United States to foreign [companies] with the intention of incorporating such software into foreign-assembled computers." *Id.* at 35a.

In light of the district court's decision, petitioner acquiesced in a stipulated judgment of liability and entered into a settlement with respect to damages, while reserving the right to appeal the district court's ruling on the Section 271(f) issue. Pet. App. 42a-43a.

4. In a divided decision, the court of appeals affirmed. Pet. App. 1a-19a.

a. Relying on its decision in *Eolas Technologies Inc.* v. *Microsoft Corp.*, 399 F.3d 1325, cert. denied, 126 S. Ct. 568 (2005), the Federal Circuit unanimously held that software code may be a component of a patented invention for purposes of Section 271(f). Pet. App. 4a; see *id.* at 11a (Rader, J., dissenting on other grounds). The court reasoned that "software code alone qualifies as an invention eligible for patenting," and noted that

Section 271(f)'s text is not limited to "patented 'machines' or patented 'physical structures.'" *Id.* at 4a (quoting *Eolas*, 399 F.3d at 1339).

A majority of the panel further held that copies of software that are created abroad by replicating a master version exported from the United States "have essentially been supplied from the United States" for purposes of Section 271(f). Pet. App. 7a. On the theory that "[c]opying * * * is part and parcel of software distribution," the court held that "for software 'components,' the act of copying is subsumed in the act of 'supplying,' such that sending a single copy abroad with the intent that it be replicated invokes § 271(f) liability for those foreign-made copies." *Id.* at 6a.

The majority expressed concern that a contrary holding would "emasculate § 271(f) for software inventions" because "[i]t is inherent in the nature of software that one can supply only a single disk that may be replicated * * * instead of supplying a separate disk for each copy of the software to be sold abroad." Pet. App. 6a n.2, 7a. In the court's view, petitioner's position would "permit[] a technical avoidance of the statute by ignoring the advances in a field of technology—and its associated industry practices—that developed after the enactment of § 271(f)." *Id.* at 9a-10a. If Congress's response to *Deepsouth* "is to remain effective," the majority asserted, it must "be interpreted in a manner that is appropriate to the nature of the technology at issue." *Id.* at 10a.

b. Judge Rader dissented. Pet. App. 11a-19a. Although he agreed with the majority that software code can be a component of a patented invention, *id.* at 11a, Judge Rader concluded that the majority erred by conflating copying software with supplying it, *id.* at 11a-13a. That software must be copied to be distributed, he

explained, "does not actually distinguish software components from physical components of other patented inventions. The only true difference between making and supplying software components and physical components is that copies of software components are easier to make and transport." *Id.* at 14a. The majority's reliance on the relative ease of copying software, he reasoned, is not a relevant distinction under Section 271(f), but instead "ignores this court's case law that refuses to discriminate based on the field of technology." *Ibid.*

Further, Judge Rader warned, the panel's decision threatens "endless liability in the United States under § 271(f) for products manufactured entirely abroad." Pet. App. 11a. Because "[n]othing in § 271(f) or its enacting documents expresses an intent to attach liability to manufacturing activities occurring wholly abroad," Judge Rader explained that respondent's remedy lies in "obtaining and enforcing foreign patents." *Id.* at 16a, 18a-19a.

SUMMARY OF THE ARGUMENT

Section 271(f) regulates the "suppl[y] * * * from the United States" of "components" of patented inventions. 35 U.S.C. 271(f)(1). Copies of computer software can constitute components of patented inventions, but petitioner did not supply the copies at issue here from the United States. Accordingly, petitioner is not liable under Section 271(f).

I. The court of appeals correctly held that copies of computer software can constitute components of patented inventions. A "component" is simply a part, element, or ingredient of an invention. A copy of petitioner's software that is loaded onto a computer is a part of respondent's patented invention, because the com-

puter cannot digitally encode and compress recorded speech, and thus does not infringe respondent's patent, unless and until a copy of the software is loaded onto it.

While petitioner argues that software is intangible design information that cannot be physically combined with other components, that argument misperceives the nature of the software component. Petitioner is correct that software code *in the abstract* is not a component. But a specific, machine-readable, physical *copy* of the software that is actually loaded onto a computer is a component, because it combines with the other components to form the patented invention.

II. Because computer software is a component in its physical embodiment, rather than in the abstract, it is clear that petitioner does not "suppl[y]" the components at issue "from the United States" within the meaning of Section 271(f). By its express terms, Section 271(f) is violated only when components are supplied from the United States and "*such* components"—*i.e.*, the very physical components actually supplied from the United States, not foreign-made copies thereof—are to be combined abroad to form the patented invention. Section 271(f) thus strikes a careful policy balance. It generally prevents companies from manufacturing the components of a patented invention in the United States for assembly overseas—conduct that is similar to actually making the patented invention in the United States. But the statute permits the manufacture and assembly of *identical* components overseas—conduct that is properly the domain of other nations' patent laws.

Here, it is undisputed that the only thing petitioner supplies from the United States is a golden master disk that is never installed on any of the computers at issue. Instead, copies made overseas from the golden master

are installed overseas in foreign-made computers for sale in foreign countries. Because petitioner does not supply those copies from the United States, it does not supply a component of the relevant computers from the United States, and it is not liable under Section 271(f).

The court of appeals nonetheless opined that foreign-made copies of software should be "deemed" supplied from the United States because computer software can be easily copied overseas, an "advance[] in a field of technology * * * that developed after the enactment of § 271(f)." Pet. App. 4a, 10a. The court's need to "deem" rather than find a key statutory element—supply from the United States—should have been a warning sign. The courts' task is to interpret the statute, not to update it. It may well be easier for software companies to replicate their components overseas than for some traditional manufacturing companies, but that fact does not justify the linguistic leap necessary to equate overseas copying with supply from the United States.

Nor does the court of appeals' revision of Section 271(f) support the statute's purposes. As noted, Congress was content to allow the manufacture of components abroad to be governed by the law of the place of manufacture. But the court of appeals' decision prevents overseas replication of software designed in the United States by prohibiting even a single transmission of a master copy abroad for copying. The court thereby produced a regime under which liability for foreign copying of patented components varies depending on the nature of the patented technology, and United States software developers are singled out for disfavored treatment.

Were there any remaining doubt about the proper interpretation of Section 271(f), the presumption against

extraterritorial application of United States law would resolve it, because the court of appeals' decision makes petitioner liable for foreign conduct—specifically, for each act of overseas software replication.

ARGUMENT

Section 271(f) prohibits, in certain circumstances, the "suppl[y] * * * from the United States" of a "component of a patented invention." 35 U.S.C. 271(f)(1) and (2). Petitioner sends master copies of software overseas, and copies made overseas from those masters are installed on foreign-made computers for sale in foreign countries. Pet. App. 45a-46a. On those facts, respondent can satisfy *either* the "component" *or* the "supplie[s] * * * from the United States" prong of Section 271(f), but not both. While the copies of the software that are actually installed on computers overseas are components of the patented invention, those copies are not supplied from the United States, but instead are made abroad. The only thing petitioner supplies from the United States—a master copy—is never installed on the foreign-made computers. As a result, petitioner does not supply any components of those computers from the United States.

I. SECTION 271(f) APPLIES TO ALL COMPONENTS OF PATENTED INVENTIONS, INCLUDING SOFTWARE COMPONENTS

The court of appeals correctly held that software can be a component of a patented invention. Pet. App. 4a (following *Eolas Techs. Inc.* v. *Microsoft Corp.*, 399 F.3d 1325, 1338-1341 (Fed. Cir.), cert. denied, 126 S. Ct. 568 (2005)). The relevant component, however, is the actual, machine-readable, physical copy of the software in-

stalled on a particular computer, not the software in the abstract.

A. Software Falls Within The Ordinary Meaning Of The Term "Component"

Because Section 271(f) does not define the term "component," that term takes its "ordinary or natural meaning." *FDIC* v. *Meyer*, 510 U.S. 471, 476 (1994); accord *S.D. Warren Co.* v. *Maine Bd. of Envt'l Prot.*, 126 S. Ct. 1843, 1847 (2006). A "component" is ordinarily understood to be "a constituent part; element; ingredient." *The Random House Dictionary of the English Language* 419 (2d ed. 1987); see 3 *The Oxford English Dictionary* 620 (2d ed. 1989) (*OED*) ("A constituent element or part."); *Webster's New International Dictionary of the English Language* 547 (2d ed. 1958) (*Webster's*) ("A constituent part; an ingredient.").

The statutory context confirms that the term "component" takes its ordinary meaning here, because Section 271(f) refers to the overseas "combination of [the] components" of a patented invention. 35 U.S.C. 271(f)(1); see 35 U.S.C. 271(f)(2). A "combination" is a "union of elements." *Deepsouth Packing Co.* v. *Laitram Corp.*, 406 U.S. 518, 528 (1972) (quoting *Leeds & Catlin Co.* v. *Victor Talking Mach. Co.*, 213 U.S. 301, 318 (1909)); see *Webster's* 533 ("a union or aggregate made by combining one thing with another"); 3 *OED* 514 ("[c]ombined state or union of two or more things"). Thus, a "component" is a part, element, or ingredient of an invention that is combined with the other parts, elements, or ingredients to form the completed invention.

Each copy of Windows that is actually loaded or installed onto a computer is a part, element, or ingredient of the patented invention. That is particularly clear

here. The foreign-made computers at issue lack the capability to encode and compress recorded speech, and thus do not constitute the "patented invention," unless and until they are loaded with an executable copy of the Windows software. See Pet. App. 3a. Thus, a software copy that is actually placed in a computer—and thereby combined with the other components—is an indispensable part, element, or ingredient of the patented invention. Indeed, computer texts commonly describe "software" as being a "component[]" of a computer system. *Dictionary of Computing* 426 (3d ed. 1990); see *Encyclopedia of Computer Science* 1599 (Anthony Ralston et al. eds., 4th ed. 2000) ("The word *software* was * * * coined to describe the non-hardware components of the computer."). Here, the installed Windows code "is not only a component, it is probably the key part of this patented invention." *Eolas*, 399 F.3d at 1339.

B. The Non-Patentability Of Software In The Abstract Does Not Prevent An Executable Copy Of Software Code From Being A "Component"

Petitioner correctly contends that software code, "uncoupled from any storage medium or computer," cannot be the subject of a patent. Pet. 3; see U.S. Pat. & Trademark Office, *Manual of Patent Examining Procedure* § 2106.01, at 2100-17 (8th ed., rev. 5, 2006) ("computer programs" and other "'descriptive material' are nonstatutory when claimed as descriptive material *per se*"). The non-patentability of software code *standing alone* has no bearing, however, on whether software can be a *component* of a patented invention under Section 271(f). Nothing in the Patent Act requires that each part of a claimed invention must be independently pa-

tentable before a patent will issue for the combination. See, *e.g.*, *Deepsouth*, 406 U.S. at 520-522.

Indeed, just three years before Congress enacted Section 271(f), this Court held that an invention was not unpatentable merely because it employed, as one step in its claimed process, a computer software program. *Diamond* v. *Diehr*, 450 U.S. 175, 187 (1981). The Court explained that an invention is not rendered unpatentable "simply because it uses a * * * computer program, or digital computer." *Ibid.*; see *Parker* v. *Flook*, 437 U.S. 584, 590 (1978) ("[I]t is * * * clear that a process is not unpatentable simply because it contains * * * a mathematical algorithm."). There is no indication that Congress intended to depart from that understanding when it enacted Section 271(f). Cf. *Miles* v. *Apex Marine Corp.*, 498 U.S. 19, 32 (1990) ("We assume that Congress is aware of existing law when it passes legislation."). Regardless of whether software code is independently patentable, therefore, software can be a part, element, or ingredient of a patented invention.

C. A Physical Copy Of Executable Software Code Can Be A "Component" Within The Meaning Of Section 271(f)

Petitioner also argues (Pet. 12) that software is nothing more than "design information" analogous to the blueprints of a machine. To the extent that petitioner means that software in the abstract cannot be a component of a patented invention, the United States agrees. But the specific physical copy of the executable software code that is actually installed on a computer (and thereby completes the assembly of the patented combination) is a component.

Petitioner is correct (Pet. 12, 16 n.2) that for purposes of Section 271(f), software in the abstract is simi-

lar in some respects to the blueprints of a machine or the sequence of perforations on a player piano music roll. If the code or sequence for the Windows object code were written on paper or memorized in someone's head as a "sequence of 1s and 0s" (Resp. Supp. Br. 1), it would not be a component of a patented invention, because the mere representation or description of the software would not form the patented invention when combined with a computer. Instead, it would simply be design information from which a component—an actual copy of the executable machine code—could be created. But when someone physically places a machine-readable copy of the object code into a computer, and thereby combines the copy with the computer, that copy—as opposed to the abstract design or representation of the software—becomes a part, element, or ingredient of the patented invention. The same would be true of the physical music roll for a player piano, as opposed to the sequence of perforations in the abstract.

The same basic distinction addresses petitioner's other arguments. Petitioner argues (Pet. 15-17) that software cannot be a "component" because it is "intangible information" rather than a "physical product." While the abstract concept or design of the Windows software lacks physical existence, each machine-readable copy of the object code that is created overseas and then installed in a computer overseas unquestionably has physical existence. Software resident in a computer's random-access memory, for instance, has a detectable physical existence in the form of the presence or absence of electrons at different locations on millions of capacitors located on the computer's memory chips. See, *e.g.*, Jeff Tyson & Dave Coustan, *How RAM Works* (visited Dec. 14, 2006) <http://computer.howstuffworks.

com/ram.htm>. Similarly, software residing in a computer's hard drive is physically embodied in the varied orientation of particles in the magnetically sensitive coating on the surface of the hard disk platters. See, *e.g.*, Jon L. Jacobi, *How It Works: Hard Drives* (visited Dec. 14, 2006) <http://www.pcworld.com/article/id, 18693-page,2/ article.html>. Indeed, it is only because the object code has physical existence that the computer's central processing unit is able to detect and implement the software.

Nothing in Section 271(f) imposes a further "tangibility" limitation. The components of the shrimp deveining machine at issue in *Deepsouth* were tangible in the sense that they were detectable by the sense of touch, but Congress did not confine Section 271(f) to the tangible parts of patented inventions any more than it restricted the statute to shrimp deveining machines. By its plain terms, Section 271(f)(1) applies to all "components" of a patented invention, while Section 271(f)(2) applies to "any" component of such an invention—not only tangible components. 35 U.S.C. 271(f)(1) and (2); see *Eolas*, 399 F.3d at 1339; Pet. App. 4a.

Petitioner argues (Pet. 16) that because the statute refers to the "combination of * * * components," it is necessarily limited to tangible components, because intangible items cannot be combined with physical ones. As discussed, however, that contention misperceives the nature of the software component. It is true that the software in the abstract could not be combined with computer hardware to form the patented invention any more than blueprints could be combined with building materials to form a house. But physically placing an actual, machine-readable copy of the Windows object code in a computer to complete the patented system

does combine that software copy with the other components so as to make the patented invention.

II. SOFTWARE COPIES THAT ARE CREATED OVERSEAS ARE NOT SUPPLIED FROM THE UNITED STATES

Although the court of appeals correctly held that software can be a component of a patented invention, it erred in holding that the creation of software copies overseas by replication of a master version provided from the United States constitutes the "suppl[y]" of software "from the United States" within the meaning of Section 271(f). See Pet. App. 4a-11a.

A. Section 271(f) Governs Only The Supply Of Components From The United States For Assembly Abroad

Section 271(f) does not prohibit the manufacture of components overseas, the inducement of others to manufacture components overseas, or the assembly overseas of components that were made overseas. Rather, the statute prohibits only the supply of components "from the United States * * * in such manner as to actively induce the combination *of such components*"—*i.e.*, the very components the defendant supplied from the United States. 35 U.S.C. 271(f)(1) (emphasis added); see 35 U.S.C. 271(f)(2) (prohibiting supply from the United States of a component "intending that such component will be combined outside of the United States"). Conduct that merely induces the combination of *foreign-made* components in foreign countries does not violate Section 271(f), because "such components" were not themselves supplied from the United States—even if the design information and instructions for their production emanated from the United States. See *Pellegrini* v. *Analog Devices, Inc.*, 375 F.3d 1113, 1115-1118 (Fed. Cir.), cert. denied, 543 U.S. 1003 (2004); *Rotec*

Indus., Inc. v. *Mitsubishi Corp.*, 215 F.3d 1246, 1258 (Fed. Cir. 2000).

The text of Section 271(f) thus makes clear that Congress struck a balance between the interests of domestic patent holders and the traditional "right of American companies to compete with an American patent holder in foreign markets," subject to the laws of the foreign markets. *Deepsouth*, 406 U.S. at 531. Section 271(f) generally prevents companies from manufacturing components of patented inventions in the United States for assembly overseas, but it leaves them free to manufacture and assemble *identical* components overseas. Regulating the manufacture of components in foreign countries is the domain of foreign, not United States, law.

That distinction is rooted not only in the statutory text, but also in Congress's intent to overrule *Deepsouth*. In *Deepsouth*, a manufacturer of shrimp deveining machines sought to avoid infringing a competitor's patent by shipping the component parts manufactured in the United States abroad and assembling the patented machine abroad. 406 U.S. at 523-524. If the manufacturer had assembled the machines in the United States, it would have been liable under 35 U.S.C. 271(a) for making a patented invention in the United States. This Court held, however, that the company was not liable because "it is not an infringement to make or use a patented product outside of the United States," 406 U.S. at 527, and the patented invention (the shrimp deveining machine) was not "made" until its components were actually assembled to complete the machine, *id.* at 528-529.

Four dissenting Justices argued that the "machine was *made* in the United States," and therefore infringed the patent, because the components were manufactured

in the United States and "everything was accomplished in this country except putting the pieces together as directed." *Deepsouth*, 406 U.S. at 533 (Blackmun, J., dissenting). The dissenters noted, however, that in their view "[t]he situation, perhaps, would be different were parts, or even only one vital part, manufactured abroad." *Ibid.* Their concern was protecting against "an infringer who *manufactures* in the United States." *Id.* at 534 (emphasis added; citation omitted).

When Congress responded by enacting Section 271(f), it agreed with the *Deepsouth* dissenters that the manufacture of component parts in the United States is sometimes so analogous to making the assembled patented invention in the United States as to warrant liability. See S. Rep. No. 663, 98th Cong., 2d Sess. 2-3 (1984). But Congress did not take the additional step of prohibiting companies based in this country from competing abroad by manufacturing component parts abroad or assembling foreign-made components abroad. As the Senate Report explains, "[t]he bill simply amends the patent law so that when components are supplied for assembly abroad to circumvent a patent, the situation will be treated the same as when the invention is 'made' or 'sold' in the United States." *Id.* at 3. Thus, "the bill provides that a product's patent protection cannot be avoided through the manufacture of component parts within the United States for assembly outside the United States." 130 Cong. Rec. 28,073 (1984) (statement of Rep. Kastenmeier); see S. Rep. No. 663, *supra*, at 6 (explaining that Section 271(f) prohibits "shipping overseas the components of a product patented in this country so that the assembly of the components will be completed abroad").

Contrary to respondent's suggestion (Resp. Supp. Br. 4-5), the government's view is not that Section 271(f) is limited to the specific facts of *Deepsouth*. Rather, the point is that Section 271(f) governs only the supply of components from the United States for assembly overseas, in order to prevent circumvention of the prohibition against making a patented invention in the United States. Nothing in the text, legislative history, or background of the statute suggests an intent to reach farther.

B. Copies Made In Foreign Countries Are Not Supplied From The United States

The court of appeals disregarded the limited scope of Section 271(f) by holding petitioner liable for inducing the combination, outside the United States, of foreign-made copies of computer software code with foreign-made computer hardware for sale in foreign countries. It is undisputed that the only thing petitioner provides from the United States is a golden master disk that "is never installed on a computer that is then sold." Pet. App. 45a; see *id.* at 47a. Because the master copies supplied from the United States are not installed on any of the computers at issue, petitioner has not supplied a component of those computers from the United States.

Respondent contends that software "is present in the foreign-made computers *only* because [petitioner] 'provided' or 'furnished'—in a word, *supplied*—it from the United States." Resp. Supp. Br. 3 (quoting *American Heritage Dictionary* 1222 (2d coll. ed. 1991)). But respondent glosses over a crucial point: The "it" that petitioner supplied from the United States is not the same "it" that is physically present in any of the foreign-made computers at issue, *i.e.*, is not a component within the

meaning of the statute. As discussed, the only thing petitioner furnishes or provides *from the United States* is a golden master that is not installed on any of the foreign-made computers at issue. The distinct physical copies that are installed in those computers (and constitute components of the patented device) are instead made in, and thus supplied from, foreign countries.

Respondent thus errs in contending (Resp. Supp. Br. 3) that the government "forgets its own characterization of the 'component' at issue" in concluding that petitioner does not supply components from the United States. To the contrary, the physical embodiment of the software code—as opposed to "the Windows object code, a binary sequence of numbers that 'lacks physical existence,'" *id.* at 4 (quoting U.S. Inv. Br. 8-9)—is precisely what is manufactured or copied abroad. A "binary sequence of numbers that lacks physical existence" may originate in the United States, but it is not a "component" of a patented invention that can be "combin[ed]" with other components to make the patented item, precisely because it "lacks physical existence." Only the physical copy of the machine-readable object code, not the abstract design or concept of the software, can qualify as a "component" the supply of which from the United States could give rise to liability under Section 271(f). See U.S. Inv. Br. 8-9 ("while the concept of the Windows software lacks physical existence, each copy of the object code that was created overseas and then installed in an allegedly infringing computer overseas unquestionably had physical existence").

Respondent's contrary position relies on conflating the master copy made in the United States with the copies made abroad, eliding the fact that they are separate and distinct physical components with separate physical

existence, and that the master copy is not itself installed on any computer abroad. Respondent argues (Br. in Opp. 18), for example, that "[t]he very same zeros and ones created in the U.S. by [petitioner's] programmers are installed on the foreign computers." But that is either legally irrelevant (to the extent respondent means only that the foreign-made copy is a perfect duplicate of the master copy) or factually incorrect (since the physical orientation of particles that embodies the object code in a particular foreign-made computer is plainly not composed of the same particles physically embodying that object code on the golden master). While the same *pattern* of zeros and ones (or, more precisely, the same pattern of electrical impulses that can be denoted by zeros and ones) is reflected on every computer that uses the Windows operating system, a different *copy* of that pattern is installed on each computer. Two copies of any item (such as a book or a player-piano music roll) may be identical, but that does not mean that supplying the first copy constitutes supplying the second.

Under respondent's contrary theory, when petitioner supplied a single master copy of Windows from the United States, petitioner in that instant also supplied from the United States every copy of Windows that would ever be made from that master in the future. There is no warrant for construing the statute to reach that absurd result. A copy installed on an overseas computer did not exist until it was created by replication overseas, and a component cannot have been supplied from the United States before it even existed. As Judge Rader explained in dissent below, "[a]s a matter of logic, one cannot supply one hundred copies * * * without first making one hundred copies." Pet. App. 13a.

Nor can one supply a component from a country in which it was never present. As the Federal Circuit noted in another context, Section 271(f) "is clear on its face. It applies only when components of a patent[ed] invention are physically present in the United States and then either sold or exported." *Pellegrini*, 375 F.3d at 1117. Because the copies at issue here were never physically present in the United States, but instead were made abroad, they were not supplied from the United States.

The court of appeals all but acknowledged as much by concluding that the foreign-made copies at issue here "may be *deemed* 'supplied' from the United States," and have "*essentially* been supplied from the United States." Pet. App. 4a, 7a (emphases added). But the role of the courts in applying Section 271(f) is limited to discerning whether the statute is *actually* satisfied, and does not extend to deeming the statute satisfied when it is, in fact, not.

C. Section 271(f) Does Not Distinguish Between Software Components And Other Components

The court of appeals was tempted to deem copies actually made abroad "supplied from the United States" because the modern "realities of software distribution" make the manufacture (*i.e.*, copying and distribution) of software abroad much less costly than the manufacture of traditional components. Pet. App. 7a; see *id.* at 6a n.2. However, Section 271(f)'s requirements apply equally to "any component of a patented invention," 35 U.S.C. 271(f)(2), without regard to the identity of the component or the cost of replication. See p. 15, *supra*. Any tailoring of the statute to deal with the "realities of software distribution" is a task for Congress.

1. The court of appeals asserted that Section 271(f) "should be construed broadly to effectuate its purposes" in order to ensure that the statute will "remain effective" in light of "advances in a field of technology * * * that developed after the enactment of § 271(f)." Pet. App. 9a, 10a (citation omitted). In patent cases, however, this Court has endorsed the opposite rule of construction: "It is our duty to construe the patent statutes as they now read * * *, and we must proceed cautiously when we are asked to extend patent rights into areas wholly unforeseen by Congress." *Flook*, 437 U.S. at 596; see *Deepsouth*, 406 U.S. at 531. The patent laws strike a "difficult," constitutionally mandated balance between rewarding innovation and not unduly stifling competition. See *Sony Corp. of Am.* v. *Universal City Studios, Inc.*, 464 U.S. 417, 428-429 (1984); U.S. Const. Art. I, § 8, Cl. 8. As new technologies have developed, "our patent and copyright statutes have been amended repeatedly" as Congress has discharged its constitutional responsibility to balance the competing interests in "fashion[ing] the new rules that new technology made necessary." *Sony*, 464 U.S. at 429-431.

Congress is fully aware of the ease with which software can be copied, and at times it has adopted special rules to modify intellectual property rights for computer software and other new technologies. See, *e.g.*, Digital Millennium Copyright Act, 17 U.S.C. 1201 *et seq.* The court of appeals erred by arrogating the authority to expand the statute's coverage beyond the limits of its text in order to ensure that Section 271(f) will "remain effective" for new technologies. Pet. App. 10a.

2. The statute's purposes do not in any event support imposing liability for overseas copying of software. The court of appeals sought to distinguish software from

traditional machine parts on the theory that "for software 'components,' the act of copying is subsumed in the act of 'supplying.'" Pet. App. 6a. There is, however, nothing unique about the fact that supplying software involves copying it. Numerous items might be replicated abroad with the aid of a master copy provided from the United States. Keys or machine parts might be copied from a master; chemical or biological substances might be created by reproduction; and paper products might be made by electronic copying and printing, to name just a few examples. The overall economic *result* may be the same whether the copying occurs in the United States or abroad, but the location of the relevant *conduct* is not, and Section 271(f) distinguishes between supply from the United States and supply from abroad.

As Judge Rader explained below, "[t]he only true difference between making and supplying software components and physical components is that copies of software components are easier to make and transport." Pet. App. 14a. It may well be that, because software is significantly easier to reproduce than most machine parts, software companies can comply with Section 271(f) more easily than many traditional manufacturers by supplying their components from abroad. But that does not justify the linguistic leap necessary to conclude that supplying one copy from the United States also constitutes supplying foreign-made copies from the United States. Indeed, the court of appeals identified only a difference in degree, not in kind, and there is no principled basis in the text of Section 271(f) for determining at what point overseas copying becomes sufficiently inexpensive that it should be prohibited by United States law. Such line-drawing requires a legislative judgment that Congress has not yet made and may never make.

Moreover, the court of appeals' decision does not promote, but instead distorts, the statutory policies. Congress did not seek to protect American patent holders from all competition by other American companies in foreign markets. Section 271(f) prohibits only domestic, not overseas, manufacture of components for assembly abroad. Under the court of appeals' decision, however, once software is designed in the United States, any transmission abroad for copying and sale abroad is subject to Section 271(f). See Pet. App. 5a-7a. By imposing liability for a single transmission to a foreign country, the court of appeals denied companies that create software in the United States any realistic avenue of competing in overseas markets without risking liability under Section 271(f). In contrast, companies in other industries that design components in the United States can replicate those components abroad without fear of Section 271(f) liability. See pp. 16-17, *supra*.

As respondent concedes (Resp. Supp. Br. 4), "there is absolutely no indication that Congress meant to treat software—of which it was clearly aware when it enacted Section 271(f)—any differently from any other components of patented inventions." Yet the court of appeals' interpretation does precisely that, and thereby frustrates the goal of a technology-neutral statutory scheme. Under the court of appeals' approach, the software industry alone is regulated in a manner that differs significantly from the fundamental balance struck by Congress, which prohibits the manufacture of components in the United States *while permitting it abroad*.[2]

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[2] That does not mean that software companies are exempt from Section 271(f), as respondent suggests (Resp. Supp. Br. 4). If petitioner sent copies of its Windows software from the United States to a foreign country and those copies were loaded onto computers, petition-

Respondent only confirms that point by suggesting (Resp. Supp. Br. 5) that software companies in the United States "can still perform much of the fundamental research that goes into software development and * * * convey their ideas to foreign manufacturers for the creation of software." The suggestion that United States-based software companies should escape liability by selling incomplete work product to foreign firms simply underscores the extent to which the court of appeals upset the balance struck by Congress. Under the court of appeals' holding, software companies based in this country must either relocate at least some of their operations to foreign countries or incur the competitive disadvantage of facing liability under Section 271(f) for overseas copying directed at overseas markets while their overseas competitors do not face liability under United States law in those markets.

While respondent contends (Resp. Supp. Br. 7) that Section 271(f) inherently presents a risk that "manufacturers of 'components' [will] move their operations offshore," the court of appeals' decision not only encourages overseas *manufacturing*, but also overseas *design*, because software developed in this country could not be transmitted abroad for replication. Respondent's contradictory assertion (*id.* at 8) that its position would "level[] the playing field among jurisdictions" by ensuring that the burdens imposed by Section 271(f) "will be the same wherever the manufacture occurs" further underscores that respondent is pursuing a different policy than the one underlying Section 271(f), which prohibits

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er would likely be liable under Section 271(f) for each such infringing copy. But petitioner did not do so here, and accordingly there is no basis for liability in this case. See *Deepsouth*, 406 U.S. at 525 n.7.

only the supply of components from the United States, not from abroad.[3]

D. The Presumption Against Extraterritoriality Confirms The Statute's Plain Meaning

If there were any doubt about the proper interpretation of Section 271(f), the presumption against extraterritoriality would resolve it. The court of appeals' decision runs afoul of that presumption by applying United States law to the foreign conduct of reproducing the Windows object code overseas for combination overseas with foreign-made computers sold in foreign countries.

1. As this Court observed in *Deepsouth*, "[o]ur patent system makes no claim to extraterritorial effect," and our laws "correspondingly reject the claims of others to such control over our markets." 406 U.S. at 531; accord *Dowagiac Mfg. Co.* v. *Minnesota Moline Plow Co.*, 235 U.S. 641, 650 (1915). Thus, "the use of [a patentee's invention] outside of the jurisdiction of the United States is not an infringement of his rights, and he has no claim to any compensation for the profit or advantage the party may derive from it." *Brown* v. *Duchesne*, 60 U.S. (19 How.) 183, 195-196 (1857).

That venerable principle follows from the text of the Patent Act, which provides that a patent confers exclusive rights "throughout the United States." 35 U.S.C.

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[3] Respondent errs in arguing that "Section 271(f) was enacted 'to avoid encouraging manufacturing outside the United States.'" Resp. Supp. Br. 8 (quoting 130 Cong. Rec. at 28,069). While a different provision of the same bill had that effect by prohibiting the *importation* of goods produced by a patented process, see 130 Cong. Rec. at 28,069, Section 271(f) inherently encourages a degree of overseas manufacturing by prohibiting domestic manufacturing of components for assembly abroad. Respondent's position would extend that incentive to design as well as manufacture in the software context.

154(a)(1). It also reflects considerations of international comity, as courts must "assume that legislators take account of the legitimate sovereign interests of other nations when they write American laws." *F. Hoffmann-La Roche Ltd.* v. *Empagran S.A.*, 542 U.S. 155, 164 (2004); see *EEOC* v. *Arabian Am. Oil Co.*, 499 U.S. 244, 248 (1991). Foreign conduct is traditionally the domain of foreign law, which may embody different policy judgments about the relative rights of inventors, competitors, and the public in patented inventions.

2. Under the presumption against extraterritoriality, Congress must provide a "clear * * * indication of intent to extend the patent privilege" abroad before the patent laws will be construed to govern extraterritorially. *Deepsouth*, 406 U.S. at 532; see *F. Hoffmann-La Roche*, 542 U.S. at 164, 174; *Arabian Am. Oil Co.*, 499 U.S. at 248. Although Section 271(f) manifests a clear intent to prevent American companies from manufacturing the components of patented inventions in the United States for assembly abroad, it does not manifest an intent, much less a clear one, to regulate the reproduction of those components outside the United States. See *Pellegrini*, 375 F.3d at 1118-1119.

Respondent errs in arguing (Resp. Supp. Br. 5-6) that the presumption against extraterritoriality is inapplicable because Congress was not "silent on the question of foreign applicability," but instead enacted Section 271(f) for the very purpose of addressing "the interplay between U.S. and foreign law." As this Court has explained, "[t]he applicability of the presumption [against extraterritoriality] is not defeated * * * just because [a statute] specifically addresses the issue of extraterritorial application." *Smith* v. *United States*, 507 U.S. 197, 204 (1993). Instead, the presumption remains rele-

vant to determining the *extent* of a statute's reach. See, *e.g.*, *ibid.*; *F. Hoffman-La Roche*, 542 U.S. at 161-162, 164 (applying presumption to antitrust statute with express provisions governing its extraterritorial application to some foreign conduct). In any event, Section 271(f)'s restriction on the supply of components "from the United States" expresses a domestic, not extraterritorial, focus, further confirming the presumption's relevance here. 35 U.S.C. 271(f)(1).

3. Although respondent argues (Br. in Opp. 20-22; Supp. Br. 5) that Section 271(f) governs only the domestic conduct of supplying components of patented inventions, the court of appeals' holding is wrong precisely because it is not so limited. When the statute is read correctly to regulate only the supply of components from the United States for assembly abroad, it has no direct extraterritorial application. But the critical aspect of the court of appeals' decision is that it converts a single act of supply from the United States into a springboard for liability each time a copy of the software is subsequently made overseas and combined with computer hardware overseas for sale overseas. As Judge Rader noted, petitioner is subjected to open-ended liability in the United States "for products manufactured entirely abroad." Pet. App. 11a. Imposing liability for conduct that occurs in foreign countries and is directed toward foreign markets fully implicates the comity concerns underlying the presumption against extraterritoriality. Cf. *Brown*, 60 U.S. (19 How.) at 194-195, 198 (applying the presumption against extraterritoriality to hold that a foreign ship was not liable for its use of a patented invention when "coming into or going out of a port of the United States," even though the patented invention was briefly used in the United States).

4. Respondent's contention (Br. in Opp. 25) that petitioner should not be able to "misappropriat[e] another's patented technology," simply misses the point that foreign law, not United States law, governs the manufacture and sale of components of patented inventions in foreign countries. If respondent desires to prevent copying in foreign countries, its remedy lies in obtaining and enforcing foreign patents, not in attempting to apply United States law to acts occurring abroad. See Pet. App. 12a, 18a-19a (Rader, J., dissenting).

Respondent complains (Resp. Supp. Br. 6) that some foreign jurisdictions are less protective of patent rights than is the United States. But, of course, whatever the margin of reduced protection abroad is equally the margin of competitive disadvantage for United States companies if they, unlike their foreign competitors, are subject to United States patent law for overseas manufacturing. Moreover, the presumption against extraterritoriality exists in large part to protect each jurisdiction's right to make its own policy decisions, and thereby "protect against unintended clashes between our laws and those of other nations which could result in international discord." *Arabian Am. Oil Co.*, 499 U.S. at 248; see *F. Hoffman-La Roche*, 542 U.S. at 164. Comity is more, not less, important when foreign law differs from United States law.

CONCLUSION

The judgment of the court of appeals should be reversed.

Respectfully submitted.

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